

ABSTRACT

A semiconductor device comprises a module board having a top surface and a backside surface, a lower chip having a first circuit operated by a first frequency and a second circuit operated by a second frequency, an upper chip disposed so as to overlie over the lower chip, having the first circuit and the second circuit, a plurality of wires electrically bonding the upper chip to the module board, and electrically bonding the lower chip to the module board, respectively, and a plurality of chip components on the module board, and the first circuit of the upper chip is disposed opposite to the second circuits of the lower chip while the second circuit of the upper chip is disposed opposite to the first circuits of the lower chip. As a result, interference by high frequencies is rendered hard to occur between the wires bonded to the upper and lower chips, respectively, at a time when those circuits having respective frequencies are in operation, thereby enabling reliability of the semiconductor device to be enhanced.